

CLAIMS

1. A mobility server for providing mobility management information to an application program providing a service to a user equipment as part of an Internet Protocol Multi-media Sub-system (IMS), the mobility server comprising
 - 5 a mobility manager operable to receive mobility dependent evaluation reports providing at least one of an indication of current conditions for communicating with the user equipment and an indication of a relative location of the user equipment, and to form the mobility management information based on the evaluation reports, and
 - 10 an application programmer's interface operable to communicate call control signalling data between the mobility manager and a session protocol server (S-CSCF) forming part of the IMS, wherein the mobility manager is operable to notify the application program of the mobility management information in response to a subscription for the mobility management information from the application program,
 - 15 the subscription for the mobility management information being provided via the session protocol server (S-CSCF) using the call control signalling data.
2. A mobility server as claimed in Claim 1, wherein the mobility manager is operable to provide the mobility management information to the application server via the call control signalling data communicated via the session protocol server (S-CSCF).
3. A mobility server as claimed in Claim 1 or 2, wherein the application program is operable in response to messages received from the session protocol server via the call control signalling data to provide the service in accordance with the mobility management information.
4. A mobility server as claimed in Claim 1, 2 or 3, comprising a Session Initiation Protocol (SIP) interface, wherein the application programmer's interface is operable to communicate the call control signalling data via the SIP interface, the call control signalling data being SIP data.

5. A mobility server as claimed in any preceding Claim, wherein the application programmer's interface is arranged to provide access to a subscriber information database (HSS) of the IMS, the subscriber information database providing 5 user profile data for the user equipment, the application program being arranged to subscribe to the mobility manager for the mobility management information, if the user profile data indicates that the user equipment is mobile.

10 6. A mobility server as claimed in any preceding Claim, wherein the applications programmer's interface is arranged to receive internet packets, the internet packets including the evaluation reports, and to provide the evaluation reports to the mobility manager.

15 7. A mobility server as claimed in Claim 6, wherein the mobility server includes a home agent for receiving the internet protocol packets from the user equipment, the mobility manager being operable to determine the relative location of the user equipment from a change of internet protocol address for the user equipment provided to the home agent, the relative location forming part of the mobility information communicated to the application program.

20 8. A mobility server as claimed in Claim 6, wherein the mobility server is responsive to the internet packets providing access network evaluation reports to determine a current state of conditions for communicating with the user equipment, the mobility server being operable to include an indication of the communications 25 conditions with the mobility management information.

30 9. A mobility server as claimed in any preceding Claim, wherein the mobility server includes a subscriber context register for storing information relating to the user profile data relevant for the mobile user equipment, the user information being used by the mobility manager to adapt the mobility management information for the application program.

10. A mobility server as claimed in any preceding Claim, comprising an application server for hosting the application program, the application program providing the service to the user equipment in accordance with the mobility management information provided by the mobility server, the application 5 programmer's interface including a facility for communicating with the application server.

11. A multi-media communications system for providing a service to user equipment in accordance with mobility management information, the service being 10 provided by an application program, the system comprising

a session protocol server (S-CSCF) operable to control the state of a communications session for at least one user equipment in accordance with user profile data,

15 a subscriber information database (HSS) for providing the user profile data to the session protocol server (S-CSCF),

a mobility server comprising a mobility manager operable to receive mobility dependent evaluation reports providing at least one of an indication of a current state of conditions for communicating with the user equipment and an indication of a relative location of the user equipment, and to form the mobility management 20 information based on the evaluation reports, and

25 an application programmer's interface operable to communicate call control signalling data between the mobility manager and the session protocol server (S-CSCF), wherein the mobility manager is operable to notify the application program providing the service to the user equipment of the mobility management information in response to a subscription for the information from the application program, the subscription being provided via the session protocol server (S-CSCF) using the call control signalling data.

30 12. A communications system as claimed in Claim 11, wherein the applications programmer's interface is operable to provide access to the subscriber information database, to receive internet packets from the user equipment providing

data representing the evaluation reports and to provide the evaluation reports to the mobility manager.

13. A method for providing mobility management information to an
5 application program providing a service to a user equipment in an Internet Protocol
Multi-media Sub-system (IMS), the method comprising

receiving mobility dependent evaluation reports at a mobility server, the
evaluation reports providing at least one of an indication of a current state of
conditions for communicating with the user equipment or an indication of a relative
10 geographical location of the user equipment,

forming the mobility management information based on the evaluation reports,
and

notifying the application program providing the service to the user equipment
of the mobility management information in response to a subscription for the
15 information from the application program, wherein the subscription for the mobility
information is provided from the application program to the mobility server by

communicating call control signalling data between the mobility manager and
the application program via a session protocol server (S-CSCF) forming part of the
Internet Protocol Multi-media Sub-system.

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14. A method as claimed in Claim 13, wherein the notifying the application
program of the mobility management information, comprises

communicating the mobility management information to the application server
using call control signalling data, the call control signalling data being communicated
25 via the session protocol server (S-CSCF).

15. A method claimed in Claim 13 or 14, wherein the call control signalling
data include Session Initiation Protocol (SIP) messages.

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16. A method as claimed in any of Claims 13, 14 or 15, wherein the
mobility server includes a home agent, and the indication of the relative location of the
mobile user equipment is provided by evaluations reports based on an indication of a

change of an internet protocol address of the user equipment notified to the home agent, the forming the mobility management information comprising

determining a relative geographical location of the user equipment from the change of internet protocol address for the user equipment provided to the home agent,

5 the geographical location forming part of the mobility information communicated to the application program.

17. A method as claimed in any of Claims 14 to 17, the method comprising providing access network evaluation reports indicating a current state of
10 conditions for communicating with the user equipment, the mobility server being operable to include an indication of the communications conditions with the mobility management information.